Schreiber's *Sp. americanus* (Versuch einer Vollständigen Conchylienkenntniss, 1793) is to me the same as the *variegatus* Röding (Bolten Catalogue p. 194). I am unable to agree with Cox (Proc. Mal. Soc. Lond. Vol. 18, p. 251) that Schreiber's species is Lamarck's *longitudinalis,* a species that I believe to be unidentifiable.

2. *Spondylus ictericus* Reeve.

1856. *Spondylus ictericus* Reeve, Conch. Icon. pl. XI, fig. 40 (a beach-rolled specimen).
1848. *Spondylus spathuliferus* Sow., Thes. Conch. p. 421, pl. 89, fig. 61. (Not of *Lamarck,* 1819, a synonym of *ducalis* Röding, 1798.)

The type of *ictericus* is beach-rolled and difficult to associate with perfect specimens. One requires a series in varying conditions to see the connection. I recently received a fine specimen from Mr. Lermond, it was taken 80 miles off the west coast of Florida. This species appears to be common in the West Indies, and like most Spondyli varies greatly in color and in the disposition and length of its spines.

A DENSE AGGREGATION OF SNAILS

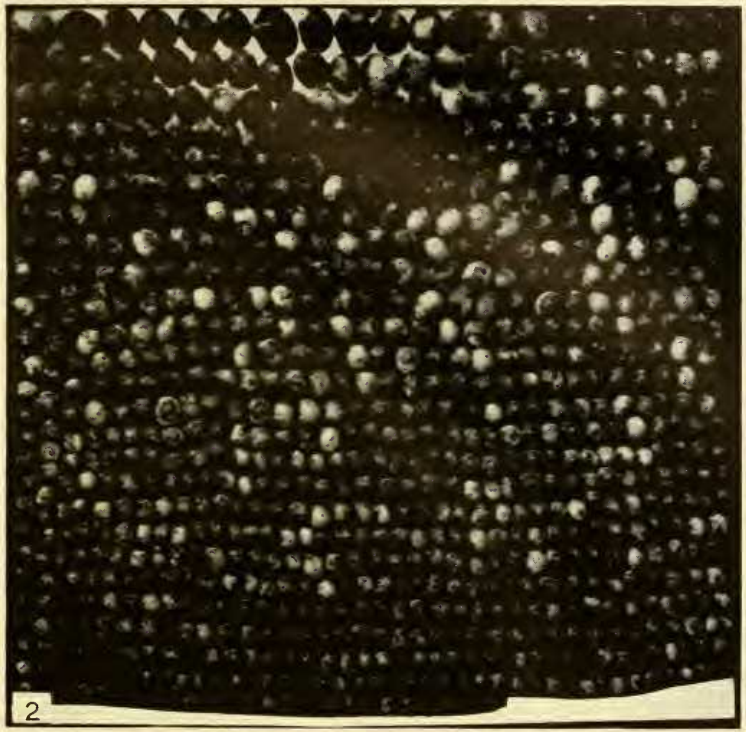
BY E. A. ANDREWS

(Plate 5)

The crowding together of animals, not members of a family or colony, may sometimes be brought about by favorable conditions for feeding and such seems to have been the case in the aggregation to be described. Land snails may aggregate about limestone, or even old oyster shells, and marine snails may crowd together upon sea weed between tides, or about food on mud flats. T. D. A. Cockerell in *Science Gossip,* 1885, described *Limnaea stagnalis* on a newspaper in a pond: "So that for a space of about a foot square nothing else could be seen." In fresh-water streams the density of snail population varies much from point to point.

The "Great River" of the northwest part of Jamaica B. W. I. drains a limestone area some twenty miles long and ten wide as a rapid stony stream with but a few miles of submerged bed where set back by the sea and navigable for canoes. Among the

various snails living in its rapid waters is the *Neritina alticola* described by Pilsbry in 1932, from specimens taken in 1910 far up the main stream near Marchmont at an elevation of 627 feet. But in 1932 this locality yielded only the common river snail, *Hemisinus lineolatus*—and it appeared as if the encroaching banana cultivation had modified the conditions too greatly. But at a much greater elevation this species was common both in 1910 and 1932 in the branch stream arising from the spring at "Spanish Dam," Catadupa. In the main stream also, some miles farther down, these snails were collected both at Shettlewood Bridge and Lethe Bridge in 1932, at elevations of 300 and 216 feet. In the last named locality there were also some *Ampullaria fasciata* and *Neritina virginea.* This last species, along with *Neritina punctulata,* was found in great numbers a few miles yet farther down stream where the last rapids enter the smooth tide-level reach of the river. This locality is shown in figure 1. Here is the head of an old sluice that once carried water to a hydro-electric plant for the town of "Montego Bay." The scattered stones swarmed with old and young snails of these two species of Neritina along with few *Hemisinus lineolatus;* and many of the small *Neritilia succinea* Sby. in clusters of fifty to a hundred. In June 1910 these Neritinas were so thickly crowded on rocks and stones, little below water level, that, in a short time, there were collected by hand some eight quarts containing 5249 shells. A month later still more were taken, by feeling them in the turbid rising freshet flow on the deeper surfaces and under sides of large stones. Often the snails *Neritina punctulata* were deeper down than the *Neritina virginea* and in spite of their wider flat form, that seems so well shaped to cling to stones, they fell off more readily when touched than the rounder *N. virginea,* escaping in the flood of rushing waters. This shrinking-in reaction may be what was described for certain Neritinas by Fredericque as "death-feigning," reported in "The Biology of the Sea Shore," by Flattely and Walton. In July 1932 both species of Neritina were still abundant in this same locality. They were commonly not far beneath the surface, crawling upon rocks and upon old water-logged trunks of trees, sometimes in clusters, so that several were taken in the hand at once. Neritilia also occurred then as



E. A. Andrews:—Fig. 1, Great River, Jamaica. 2, *Neritina virginea* and *N. punctulata.*